2013

My Journey from Physician to Psychologist: Relational Touch in Psychotherapy

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Submitted in partial fulfillment of the requirements for the degree
of Doctor of Psychology in the Department of Clinical Psychology
of Antioch University New England, 2013

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MY JOURNEY FROM PHYSICIAN TO PSYCHOLOGIST:
RELATIONAL TOUCH IN PSYCHOTHERAPY

presented on August 22, 2013

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Dedication

This essay is dedicated to my two daughters, Alison and Elisabeth, who, as children, taught me more about attachment than books could ever do; and now, as adults, teach me more about what it means to be a strong, healthy, and happy woman than I could ever have learned on my own. I am, indeed, one lucky mama.

Acknowledgements

As a physician, my armamentarium includes the tool of touch which I use to both diagnose and heal. Mostly, however, I use touch to reassure the patient that she is safe in my hands. Without that, I've lost the ability to even begin to diagnose and heal. When I began the program of study at ANE, I recognized that touch is relatively proscribed in psychology, and I was flummoxed by this loss. What could I possibly use in its stead? This paper acknowledges all the individuals at ANE who have walked with me on the journey to answer this question. Most importantly to me, however, have been the three professors on the dissertation committee. I consider them to be my mentors, as well as my friends. Because they have agreed to take this journey with me, I've begun to appreciate the salience of the use of the tools of the therapist that will allow me to "hold" my patients without the use of touch and reassure them that they are safe in my hands.

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Abstract

A physician's armamentarium includes the presence of the tool of touch which is used not only to diagnose and to heal, but also to reassure patients that they are safe and well cared for in the hands of the physician. The use of touch in the practice of psychology, however, is relatively proscribed. In this essay, I examine how we, as psychologists, can best "hold" our clients without the use of touch. In the first part of this essay, I explore some theoretical considerations on relational touch in psychotherapy. I define relational touch as touch that occurs between people and is comprised of both positive intentionality and positive purpose. I describe the psychological literature related to this conceptualization of touch, from the work of Watson to Harlow, over the past 100 years. A description of the power of relational touch in medicine follows. The biopsychosocial impact of relational touch on development is unearthed, in part, through an understanding of the neurophysiology of touch. Next, I turn to attachment theory and the mother-infant dyad, and explore the right-brain mediated pre-verbal communications, including relational touch, which allow the infant to feel safe and well-cared for. In the second part of this essay, I discuss some clinical considerations on relational touch in psychotherapy. I begin with an exploration of the historical and theoretical considerations that surrounded Freud's initial embracement of and eventual proscription against the use of relational touch in psychotherapy. A discussion of the origins of psychotherapies that utilize relational touch as their primary therapeutic modality follows. Next, I discuss some benefits of the use of relational touch in psychotherapy on the fostering of a therapeutic alliance; the facilitation of clients' self-disclosure; and the generation of a sense of safe space during session reminiscent of Winnicott's concept of a holding environment. An acknowledgment that the field of psychology is embedded in a cultural matrix in which issues, such as power dynamics inherent in the therapist-client dyad,

create pitfalls to the judicious and thoughtful use of relational touch in psychotherapy follows. Political and ethical considerations, including American Psychological Association's silence on the use of relational touch in psychotherapy, as well as an exploration of the psychotherapist's ethical obligations, round out the discussion.

Keywords: touch, developmental theory, somatically-based psychotherapies, ethics

My Journey from Physician to Psychologist: Relational Touch in Psychotherapy

Part I: Theoretical Considerations on Relational Touch in Psychotherapy

The real voyage of discovery consists not in seeking new landscapes, but in having new eyes.

— Marcel Proust

Chapter 1: Introduction

It was that time again in New England, the precipice between Indian summer and autumn, when the red maples morph from lackluster green to their inherent vermilion brilliance. I was sitting by an open window in a third-year psychology graduate school course on Motivational Interviewing admiring the bucolic landscape below me when the first slide entitled "Why do people change?" caught me off-guard.

Squirming in my chair a bit, I thought, once again, about my own change from physician to psychologist, mulling over its origins. You see, in my previous career, I performed Pap smears for a living. Of course, as a physician trained in obstetrics and gynecology, I did much more than just that. I delivered babies, for example, and removed ovarian tumors. I treated endometriosis and helped infertile women become fertile ones. But most women who came to see me, came to see me for their Pap smears. "I need a *Pap smear*," they would tell my receptionist when they called to make an appointment for their annual physical examination.

During a patient's visit, I would collect a thorough history of how she had been feeling since her last appointment with me. Then, I would measure her vital signs by holding the back of her palm in my hand and gently pressing on the radial artery with my forefinger to assess the rate and rhythm of her pulse. Next, I'd perform a breast exam to rule out cancerous growths by placing my hand on her breast to carefully palpate all parts of the breast in a concentric circular motion that would extend into the axilla to check for lymphadenopathy. Percussion of her

abdomen with my hands to assess the size of her liver and other abdominal organs would follow. Finally, I'd perform a pelvic examination by touching her abdomen with my left hand and placing my right hand in her vagina to assess the contour of her cervix and ascertain that her uterus and ovaries were of normal size, shape, and consistency. And, oh yes, I did a Pap smear.

Pap smears, per se, are done to detect cervical cancer, a relatively uncommon female cancer in 2012 as cancers go. But in 1928 when the Greek founder of the technique, George Papanikolaou, told an incredulous audience of physicians about his ability to touch the cervix with a Q-tip and gather cells from the lining of the vaginal tract, then smear it on a glass slide for microscopic examination as a way to diagnose early cervical cancer (Papanikolaou, 1928), young women were dying of undiagnosed cervical cancer by the hundreds of thousands (Vilos, 1998). It wasn't until years later, in 1941, that the medical establishment caught on, recognized the practical significance of the Pap smear as a screening tool for cancer, and brought Pap smears into mainstream medicine (Papanicolaou & Traut, 1941). At that time, cervical cancer was a leading cause of death among young women (Vilos, 1998). One notable celebrity, Eva Peron, who touched the hearts of the people of Argentina in the 1950s as its First Lady and champion of worker's rights and women's suffrage, died at age 33 of cervical cancer (Ortiz, 1997). Since that decade to the present time, the death rate among women from cervical cancer has diminished by 70% (DiSaia & Creasman, 2007).

Cancer of the cervix follows a predictable sequence: Precancerous changes are detected readily with a touch of a Q-Tip in cells sampled by the Pap smear. The evolution from the precancerous stage to metastatic cancer takes place over many years and, for this reason, annual screening makes this a curable cancer and a totally preventable disease. It's this mere touch of a Q-tip that has revolutionized the diagnosis and treatment of gynecological cancer.

Performing a Pap smear is a routine process, and I can do it in just a few minutes. A Qtip, a jar of formalin, and a speculum are all I need. I remember one day in my office during one routine Pap smear on one routine patient in the late 1990s that my nurse commented on my tendency to dialog with patients as I placed the speculum in the vagina, located the cervix and removed squamous and columnar cells from the endocervix, and dipped them in the fixative. "How's your family been?" I would ask. "Did you get that promotion at work?" "Are you still with the same boyfriend we talked about last time you were in?"

Yes, the Pap smear was interesting to me and, of course, the results were important. But as so often happened to me as I worked as a gynecologist and cared for the physical needs of my patients, my mind would wander sinuously down a path of unspoken curiosities and wonders. I wanted to enlarge the story of the woman who entrusted her care to me beyond the mere Pap smear. I wanted to know about her love life, her work life, her joys and her fears. What were her biggest challenges? Her most cherished triumphs? How fulfilling were her interpersonal relationships?

Since that routine day in the late 1990s, I have often wondered what it is about me that finds these questions so compelling. Over time, I have learned that I am tenaciously drawn to a line of work that invites me fully into the lives of others and, once there, necessitates that I take an honest and mindful look around—at my clients as well as at myself. And as psychologists, we do this well. While medicine and science oblige the doctor to ask the question how, psychology and social science invite the therapist to ask the question why, an infinitely more gritty line of inquiry. Questions of why spearhead the making of meaning—a process of reflecting upon, enlarging, integrating, and honoring our patient's stories. It is this permission to ask these

questions, coupled with the audacious expectation of ultimately closing in on the answers, which has led me to my work in clinical psychology.

As I continued to glance out that window of the classroom on Motivational Interviewing on that autumn day, I noticed that the colors were even more resplendent than before. I began to understand that my own transition from medicine to psychology, which affords me meaningful work consistent with my values and self-image, comprises more than a mere lateral shift in perspective. When I first began my studies in clinical psychology, I readily recognized how dependent I was on the use of touch in patient care: It was an essential part of my armamentarium and both necessary and sufficient—or so I thought—to my ability to diagnose, treat, reassure, and connect with women in my care.

As a psychologist, how was I supposed to do these things that are crucial to quality client care without the use of touch? Were there other ways of doing these tasks that I could attempt to master? Was there knowledge about diagnosing, treating, reassuring, and connecting with patients that medicine had failed to teach me or that I had failed to learn? With each course I completed in graduate school, for example, I became more certain that my medical training had taught me precious little about the workings of the human mind. Could this knowledge of how the mind works in interpersonal relationships help me to reformulate my conception of touch? With my background in medicine and basic science and my new-found study of psychology and social science, I began to place myself at a nexus of these knowledge boundaries that I find to be porous and leaky. Situating myself at this intersection creates, for me, a fascinating vantage point.

Statement of the Problem

David Copperfield is hailed by audiences and critics alike as the greatest magician in the world. The appellation may be merited as the Guinness Book of World Records boasts that Copperfield has sold more tickets than any other solo entertainer in history: More than Michael Jackson, more than Madonna─even more than Elvis. His spectacles are vast, imaginative, and technologically savvy. How else could he make Bartholdi's Statue of Liberty disappear in front of a live audience on Liberty Island?

But even this talented prestidigitator has a wand. Without it, *La Liberte* would remain securely ensconced on her pedestal. Admittedly, it's the magician's mind, the neuronal complement of his cerebral cortex comprised of white, glimmering myelinated axons and neurotransmitter-laden watery synapses, which understands the *leger du main* of not only how the rabbit is pulled from the hat, but also how the rabbit got into the hat in the first place. Yes, it's the mind that holds the secrets of all of Copperfield's spectacles. It's the touch from the tip of his wand, however, that wields the illusion.

I believe that the power of physical touch is like magician's wand: Although never more powerful than the magician himself, it is, in itself, an awesome tool.

In this essay, I explore the subtle and complex meaning of the presence of the wand,(i.e., relational touch), to physicians, as well as the meaning of the absence of the wand to psychologists. In Part I, I begin with some theoretical considerations on relational touch in psychotherapy through a survey of twentieth century scholarship on relational touch. Next, I describe the concept of the power of relational touch in medicine. A review of psychological research on relational touch from John Watson to Harry Harlow follows. I then turn attention to neuroscience and the salience of relational touch to psychosocial development during which the

biological substrates of relational touch, especially the role of oxytocin (OT), are described. I then turn to the field of neuroscience and interpersonal neurobiology and discuss the use of pre-verbal attachment communications in the mother-infant dyad and how these communications can be used to hold my clients in the absence of relational touch.

In Part II, I turn attention to some clinical considerations on relational touch in psychotherapy. I begin with an exploration of Freud's thought that led to his proscription of the use of relational touch in psychotherapy. I then present some benefits of the use of relational touch in psychotherapy on creating a therapeutic alliance, increasing client self-disclosure, and generating a therapeutic holding environment as first described by Winnecott in the 1950s. Next, I present some pitfalls of the use of relational touch, acknowledging that psychotherapy is firmly embedded in a cultural, political, and ethical maitrix that informs and curtails the use of relational touch in psychotherapy. Finally, I conjecture on where a discussion by the field of psychology should begin on the use of relational touch in psychotherapy and muse on how I, as a psychotherapist, can hold my clients in the absence of touch.

Literature Review: A Survey of Scholarship on Relational Touch

This literature review surveys almost 100 years of scholarship in the field of basic science and psychology on the concept of touch, including what I am calling relational touch. I define relational touch as touch that occurs between people and is comprised of both positive intentionality and positive purpose. It is obvious that not all touch is relational. For example, if you are riding the red line of the MBTA in Boston on a sweltering summer day from your home in North Quincy to your work on Massachusetts Avenue, and a fellow rider inadvertently touches your arm as the train comes to a screeching halt at Back Bay, relational touch has not occurred, as intentionality and purpose are absent. Later that day, however, if you and your

husband are riding the red line to Symphony Hall, and he takes your hand with excitement just anticipating an evening's performance of Ravel's Piano Concerto in G major, relational touch has occurred.

The focus of this literature review is to describe what can be gleaned from scholarship over the past 100 years concerning the theoretical and the clinical considerations of the use of relational touch in psychotherapy. To this end, I begin Part I of this essay with selected theoretical considerations and an understanding of the salience of relational touch to our psychosocial development through a critical examination of a purposeful sample of psychological and basic-science research outcomes published in English in peer-reviewed journals. I begin with the psychological literature that informs my concept of relational touch starting with the writings of John Watson in the 1920s and ending in the 1960s with Harry Harlow's focus on the salience of touch to our earliest psychosocial development. I next turn to the scientific scholarship of touch perception and the neurophysiology and neurochemistry of touch. The literature on the biopsychosocial impact of relational touch on development with a focus on attachment in the maternal-infant dyad is explored.

In Part II, I turn to some clinical considerations on the use of relational touch in psychotherapy. I begin with the writings of Sigmund Freud on the early prescription and the later proscription of its use and trace the historical origins of body-oriented psychotherapies through the writings of William Reich and Alexander Lowen. I next turn to the clinical literature, often anecdotal, which documents the benefits of the use of relational touch in psychotherapy, including Winnicott's description of his use of relational touch in analysis. Following this, I peruse the published literature of the American Psychological Association (APA) for explicit

guidance on the use of relational touch in psychotherapy. Finding none, I scrutinize its ethics code (APA, 2002) and use the extant ethical principles of autonomy, respect for dignity, non-malfeasance and beneficence to better understand the myriad pitfalls contemporary psychotherapists face in the use of relational touch in their own practice. Finally, I turn to the writings of contemporary interpersonal neurobiopsychologists, such as Allen Schore, to better understand how I can hold my clients in the absence of relational touch.

The choice of research to include in this review, as well as the choice of research to exclude, was significantly affected by my own subjective, educated guess on its utility to enrich my understanding of touch as related to this essay's statement of purpose. Most importantly, emerging themes in this review provided me with an understanding of what has been done in the field of research on relational touch and what still remains to be done in order to fully understand the role of relational touch in clinical care. In this context, this essay is meant to be a heuristic enterprise, rather than a definitive answer and closed chapter to the issues presented herein.

At the turn of the 20th century in the United States, a research interest in relational touch began that is best understood in an historical context. The preceding decades of the 19th century had witnessed high infant mortality rates approaching 160 deaths among every 1000 live births (Kliegman, 2003). Due to the lack of effective child labor laws, those children who did survive their infancy were often exploited in factories, mills, and farms. By 1900, for example, two million children under the age of 15 were working full-time (Kleigman, 2003). The desire to improve the lot of infants and children was paramount in the progressive social movements that rose to prominence in the 1890s and ended only with the advent of the First World War (Starker, 2008). To this end, professional societies such as New York's Society for the Study of Child Nature were established to scientifically study the parenting process (Starker, 2008).

At this same time, studies on behavioralism dominated the psychological literature. In this context, relational touch, especially in the mother-infant dyad, was deemed by many prominent scholars to be anathema to salubrious psychosocial development. For example, John Watson's *Psychological Care of the Infant and Child*, published in 1928, was a guide for parents that extolled the dangers of affectionate touch to the psyche of the developing child. Watson's strict behavioral approach to child rearing was not only adopted by many parents, but also by many child-care institutions, such as foundling homes.

But by the 1940s, Renee Spitz was questioning Watson's findings through his observations of the high mortality rates of children with failure to thrive (known at that time as hospitalism) who were raised in institutionalized settings influenced by these Watsonian techniques. His 1945 monograph titled *Hospitalism: An Inquiry into the Genesis of Psychiatric Conditions in Early Childhood* made significant contributions to the burgeoning argument that relational touch was, indeed, necessary to the physical and cognitive well-being of the child (Spitz, 1945). In addition, his scathing 16 mm video, *Grief: A Peril in Infancy*, recorded the plight of children dying from infections which Spitz asserted were directly related to the absence of relational touch (Spitz, 1947). Spitz's work motivated the scientific community to view the subject of relational touch in child development as a legitimate research undertaking.

Influenced by the momentum of ethnological research on relational touch, as well as Spitz's work in foundling homes, John Bowlby agreed with the concept that a child's relationship with the primary caregiver can have salubrious effects on physical, emotional, and cognitive development. He was unsure, however, if relational touch, per se, was the causal factor. Indeed, the literature of the time was rife with speculations on other variables. Both Sigmund Freud (1905) and Anna Freud (1952), for example, had written about the significance

of the breast and the breast milk, respectively, to the bond between the mother and infant, whereas Melanie Klein's *Envy and Gratitude* (1957) conceived of the causal factor as a more ethereal innate drive for closeness. Bowby's 1958 publication, *The Nature of the Child's Tie to His Mother*, contributed significantly to the field of relational touch by demonstrating that infants have what he termed attachment needs for maternal touch and proximity.

This embracement of the topic of relational touch in scientific circles in the 1950s set the stage for Harlow's work on touch in monkeys which mimicked Spitz's studies by observing the cognitive and social problems in infant Maques' separated from their mothers. According to Harlow, both Sigmund Freud and Anna Freud were wrong. Harlow's 1958 monograph, aptly entitled *The Nature of Love* showed not only that relational touch (which he termed contact comfort) was the salient factor in healthy child development, but also that the mother's association with food was an inadequate mechanism for the persistence of the mother-infant bond.

Along with these ethnological studies on relational touch, as well as scientific observations of the salience of touch to the child, the literature of the second half of the 20th century was replete with advances in the understanding of the basic science of the mechanics of touch perception and the neurophysiology of touch. By the mid-20th century, for example, the study of the anatomy and physiology of the skin was common in research laboratories and new journals, such as the *Archives of Dermatology*, first published in 1955, were established to disseminate the research findings. More recently, journals such as *Neuron*, first published in 1997, and the *Journal of Neuroscience*, first published in 1996, can be found to be replete with articles on the neurophysiology and neurochemistry of touch. Literature published in these journals at the turn of the 21st century understands the skin to be a neuroendocrine organ

responding itself to the stimulus of relational touch with the release of specialized hormones, such as OT.

Understanding this, what exactly is it about relational touch that connects people together? In *The Project for a Scientific Psychology* (1895/1968), Sigmund Freud had opined that, one day, all concepts in psychology would be based on an organic substructure. A premise of this essay is that, if I understand how the brain is affected by relational touch—and I think that I can by delving into the field of interpersonal neurobiology—then I can determine how best to connect with my clients and to hold them in the absence of physical touch.

Feldman (2010, 2012) has significantly contributed to the field of interpersonal neurobiology by demonstrating the neuroscience of relational touch through her elucidation of the neurochemistry of maternal-infant postpartum behavior which includes a choreographed dance of relational touch, as well as other preverbal attachment communications. These behaviors, all of which originate and are processed by the right brain, seem to be medicated through the neurotransmitter OT. The salubrious biopsychosocial effects of these pre-verbal attachment communications last well beyond our childhood years.

Touch is but one of the pre-verbal attachment communications, albeit an important one, that is utilized by the mother to create an attachment in the mother-infant dyad. Other pre-verbal behaviors, all of which are processed in the right brain, including maternal presence, attention, gaze, prosody, tone and pitch of voice, attunement and unconditional positive regard, are part of the epigenetically determined repertoire of maternal behaviors which is used not only to forge secure attachment, but also to impact physiological and emotional homeostasis and regulation.

During psychological treatment, my goal to create a holding environment for my client without the use of touch must begin with these same right-brain mediated pre-verbal attachment

communications. Indeed, I am sure that it is these preverbal elements of connection, such as intonation, prosody and synchronized rhythm, that impact stored, historical neural pathways derived from the early mother-infant dyad. In this way, the foundation for the therapeutic alliance is laid and holding, without touching, can begin.

Part II covers some clinical considerations of the use of relational touch in psychotherapy and opens with the question of where, when, how, and why the proscription on the use of relational touch originated. As with most questions relating to the early history of psychotherapy, the literature begins with Freud's documenting his clinical observations and developing his theories on Rathausstrasse 7 in Victorian Vienna at the turn of the 19th century. In *The Ego and the Id*, Freud (1920/2013) lays out his early theory of the mind and body writing that lack of body sensations, such as touch, would limit ego differentiation form the id and thus thwart ego development. Indeed, Freud greatly relied on the use of relational touch in psychotherapy during his own journey from physician to psychoanalyst as detailed in *Studies on Hysteria*. Freud's (1895/1980) eventual proscription on the use of relational touch in his work was informed perhaps less by the changes in his theories over time and more by his determination that his theories, as well as himself and his colleagues, be seen as acceptable to a society heavily influenced by bowdlerizing Victorian mores. As one reads Freud's vituperative letters to Ferenczi, a former member of Freud's inner circle who became, over time, dauntless to Freud's interdiction on touch while refusing to chant amen, one can imagine the beads of sweat on Freud's brow as he chastises this renegade.

Wilheim Reich, another turncoat from Freud's inner circle, was evidently not deterred by Ferenczi's very public expulsion from Freud's grace. In *Character Analysis* (1949), he postulated that an individual's neurotic character could result from the physical blockage of

energy, or orgones. This blockage could be visualized as muscular rigidities in the body and treated by the psychotherapist's use of orgonomic massage. Several years later, Reich's student, Alexander Lowen, furthered his mentor's theories. In *Bioenergetics* (1975), he postulated that orgonomic massage could free blocked unconscious memories and thus enrich the process of free association during therapy.

As the use of relational touch in psychotherapy gained traction in these and other body-oriented psychotherapies, psychotherapists who saw the benefits of relational touch in their own practices began to write about their experiences. Mintz (1969), for example, wrote about her own use of relational touch to foster clients' self-disclosure while Hubble, Noble, and Robinson (1981) reported that their use of relational touch enriched the therapeutic alliance. Pediatrician turned psychoanalyst, Daniel Winnicott, documented his own use of relational touch in psychotherapy in his *Collected Papers: Through Pediatrics to Psychoanalysis* (1975) suggesting that touch facilitates the creation of a holding environment. Other more contemporary authors, for example, Horton, Stark-Elifson, and Emshoff (1995) and Hunter and Struve (1998), observed relational touch to lead to a similar enrichment of a sense of safe space.

Given the myriad benefits of relational touch in psychotherapy, why is its use not more widespread? Psychotherapy is embedded in a cultural, political, and ethical context which may make its use problematic. For example, APA's silence on its use deters many practitioners. Indeed, the APA has published no guidelines or bulletins on either the technical or the ethical aspects of the use of relational touch in psychotherapy. This is true despite its own admonition that psychtherapists practice in accordance with standards and guidelines prescribed by their professional organization. Even its Ethics Code (2002) does not contain the word touch.

A close perusal of the APA's 2002 Ethics Code (APA, 2002), however, provides broad ethical strokes from which the ethical usage of relational touch can be inferred. Psychotherapists who utilize relational touch in their practice must adhere to this Code's principles of autonomy and respect for people's rights and dignity. The ethical literature on the salience of the judicious use of influence and avoidance of paternalism captures some of the stepping stones that must be traversed to comply with these ethical obligations. Feminist literature on power dynamics inherent to the therapist-client dyad is a useful lens through which the myriad meanings of relational touch in the dominant Western culture can be best understood.

Psychotherapists who use relational touch in psychotherapy are also bound by the ethical principles of non-malfeasance and beneficence. The concept of non-malfeasance has its literary genesis in the fourth century, B.C.E., while its sister corollary, beneficence, was first penned by British philosopher John Stuart Mill in his 1836 tome, *Utilitarianism,* which canonized the greatest- happiness principle. The perusal of this literature aids in shining the proverbial light in the darkness which can guide psychotherapists' adherence to ethical principles in their own use of relational touch.

Delimitations

Because this essay focuses on relational touch, other types of touch, such as sexual touch, passive touch, harsh or negative touch, and self-touch, will be overlooked or treated briefly and will be discussed only in as much as they have a direct bearing on and enhance our understanding of relational touch. In addition, the clinical use of relational touch in adult psychotherapy is the focus of this essay and the use of relational touch in child psychotherapy, albeit a fruitful topic for future exploration, is not addressed. In addition, throughout this essay, I use the word "mother" to refer to the primary attachment figure, even though I recognize that the

infant's primary attachment figure may not be the mother and that there may be more than one individual who serves as the primary attachment figure for the child. And I must also confess that, as a beginning psychologist, I am more comfortable with certainty than ambiguity and clarity than inchoation. This limitation will, no doubt, change over time.

Chapter 2: The Power of Touch to the Physician's Armamentarium

Medicine is a hand skill, similar to the hand skill of flying a plane or playing a video game. These skills are developed through both explicit and implicit memory over time and demand practice. As a first-year medical student, I learned the art of physical diagnosis through observation and repetitive mimicking of my mentor's hand movements in hopeful effort to master the palpation of thyroid glands, liver edges, and lymph nodes. By modeling my hands after my mentor's, I held the power to differentially diagnose Hashimoto's thyroiditis from alcoholic cirrhosis or non-Hodgkin's lymphoma.

As I advanced in pedagogy, I was invited into the inner sanctum of the operating room and relied on implicit memory to learn the feel of holding a scalpel on bolo alert as it traversed abdominal epidermis through amber subcutaneous fat, gleaming fibrous fascia, and filmy, flimsy peritoneum on its mission to find and excise a pernicious appendiceal abscess in an adolescent. A few years more experienced, now a surgical resident, I gave up my scalpel for the longer and more labyrinthine laparoscope and consciously connected my cerebral cortex with implicit memory of the touch of the scalpel to attack the more challenging cases of resecting paraaortic lymph nodes for epithelial ovarian cancer in a post-menopausal woman.

Touch is one of the physician's most powerful tools. As a physician, I can palpate the swollen, meniscal injury of an Olympic skier's knee, for example, and determine with dead certainty whether to put her on a gurney straight away to the operating room, or prescribe a course of non-steroidal anti-inflammatory medication, or send her back to the miscreant moguls. My touch does this in a matter of minutes.

But without the touch, the power of this prestidigitation is lost. If a patient complains of pain, and I look at the site of her suffering from the corner of the room without touching the area

of concern to her, I lose the ability to fully alleviate her surety of devastation or even to convince her to undergo further testing. Even if I know with certainty by assessing the severity of the injury through mere inspection of the bloated bursa and the elongating crimson of the surrounding epidermis, I cannot convince her that I am certain of what she needs without touching the area of concern. My cerebral cortex knows the secrets of the illusion, but I must pull out my wand to complete the spectacle and satisfy the audience. My experience as a doctor teaches me that without the touch, without the skilled palpation, without my hand on her body, I will not totally eradicate her concerns nor mitigate her suffering. But why is this so?

After decades of wondering about this as a physician, I might have found the answer as a psychologist: Without my hands, I cannot reach her limbic system to modulate anxiety, fear, or trepidation. By touching her, however, I wield the power to connect with her limbic system and convince her cerebral cortex that I have located the area of concern, thoroughly assessed the source of the suffering, and that my hands, skilled through the touching of thousands of others with similar concerns, working in conjunction with my cerebral cortex, have made an accurate diagnosis.

If we turn, briefly, to the field of neurobiology, we find support for some of my inchoate conjectures. Neurobiological studies reveal that the development of the right hemisphere is privileged prior to language acquisition in the infant (Schore, 1994). This suggests that early experiences prior to language, such as the experience of touch in the mother-infant dyad, are stored in emotional memory located in the infant's dominant right hemisphere, rather than the language-laden left hemisphere. This dominance of the right hemisphere during the first 18 months of life (Cozolino, 2006) explains why early events are not recalled as conscious, linguistically-cued memories (infant amnesia) as they would be if they were stored in the left

hemisphere, but rather, are recalled as feelings or a felt sense (Damasio, 2000). Thus, our initial ways of knowing that we are safe, loved, well cared for, and secure are as a felt, bodily sense that begins during the earliest hours, days, and months of our prenatal (Ulfig, Setzer, & Bohl, 2003) and post-natal lives and is stored in our emotional memory.

Armed with this information, let's turn our attention back to our unfortunate skier. As the EMTs are transporting her down the mountain to my office, I prepare myself to meet her. I turn on the x-ray machine, scrub my hands with antiseptic, and then unwrap sterile scissors and gauze. As she enters my office, I introduce myself and obtain a general medical history. Then I focus on her presenting complaint: How did she fall? On what part of her body did she land? Did she lose consciousness when she fell? Is her leg the only part of her body with pain? If the injury is not too severe, perhaps a little humor is in order and I commend her for being brave enough to tackle the black diamond trails with green circle skills. Perhaps she thinks of it, in retrospect, (she's smiling now) as a foolish attempt to keep up with her kids. She's less anxious; becomes more talkative; looks more relaxed. All this communication occurs, as my sterile scissors fillet her down ski suit and smart wool leggings.

Then, in the space between healer and patient, I reach out and touch the part of her body where she experiences pain. My hands have felt this type of break before. A simple fracture, I explain. A short cast for only a few weeks will be necessary. But first, I'll order an x-ray to confirm what my hands know for sure. Her eyes let me know that she is relieved.

As I attend to this woman, my mind wanders, and I find myself wondering how this woman with the broken leg comes to believe that she has been well cared for? How does my touch and my closeness transmit to her that she is safe and secure in my care? Most importantly, as I enter the profession of psychology, which its relative proscription against touch, how do I

accomplish this without the power of touch? Can I successfully prestidigitate without the wand? Or, in the language of psychology, how do I hold without touching?

Chapter 3: A History of Relational Touch in Psychology

I'm not the only professional to spend a lifetime wondering about the power of touch. Most of the fascination about touch, and therefore most of the research, has been in the purview of psychologists. There is some irony here as psychologists, as opposed to physicians, don't value the power of touch in their own armamentarium. Indeed, for most psychologists, the mere thought of touching a client makes them at best, uncomfortable, and at worst, squeamish, and most proscribe using touch in therapy.

John Watson and Behavioralism

Although every child psychologist today acknowledges the salutary value of relational touch in the creation of an emotional connection between mother and infant, this has not always been the case. Shortly after the First World War, psychologists were embroiled in a conflagration among themselves over parenting practices. One such psychologist, a researcher named John Watson, was a devotee of behaviorism at Johns Hopkins University, as well as president of the APA in 1915. From these pulpits, he not only preached against the affectionate touch of the mother, but also decried behaviors such as cuddling or cradling or holding an infant who was distressed. In his 1928 best seller, *Psychological Care of the Infant and Child*, Watson wrote:

> When you are tempted to pet your child, remember that mother love is a dangerous instrument. Never hug and kiss them. Shake hands with them once in the morning. Give them a pat on the head if they have made an extraordinary good job of a difficult task. Once a child's character has been spoiled by bad handling, who can say that the damage is ever repaired? (Watson, 1928, p. 82)

Watson's recipe for raising healthy children proscribed affectionate touch and admonished against the dangers of too much touch from caretakers. He was convinced, through

his research, that children are best raised through objective conditioning techniques, and that there are “serious rocks ahead for the over-kissed child” (Watson, 1928, p. 71).

Rene Spitz and Hospitalism

Two decades later, another researcher, Rene Spitz, joined the ruckus over parenting practices as a supporter of the importance of touch to the mother-infant dyad. Spitz was a Viennese psychoanalyst, a Jew who had fled from Austria to France, then from France to Mount Sinai Hospital in the 1940s as Hitler’s armies spread across Europe (Hergenhahn, 2005). He vehemently disagreed with Watson’s behavioral approach to parenting and based his opinion on data collected while he observed two sets of very unfortunate infants and toddlers: one group comprised children left by their parents at a foundling home; the other was composed of children of incarcerated women who attended a nursery school attached to the prison.

In the ubiquitous foundling homes in America shortly after the decade of the peccadillos of the Roaring Twenties, Watsonian behaviorism was alive and thriving. This was the era before Fleming recognized the rapaciously lethal effects of penicillin on bacteria in his Petrie dish. Consequently, in response to the high number of orphanage deaths from infectious diseases, foundling homes attempted to keep the children safe by separating them from one another. Caretakers were prescribed to handle children sparingly. Indeed, most children were fed from a bottle propped up for them, so they would not be held during feeding (Karen, 1977). To further minimize touching of infants in these settings, a box equipped with inlet and outlet valves with a plastic sleeve arrangement for the attendants’ arms was used. The infant was placed in this box and was taken care of untouched by human hands (Bakwin, 1942).

The thought of the rapid spread of endemic illnesses, such as measles and tuberculosis, through the nursery was the institutions' greatest nightmare. Consequently, in foundling homes,

babies had only custodial care: They were perfunctorily fed and clothed and kept warm and clean, but were not touched, cuddled, or caressed. Sterile conditions were strictly enforced: Children were isolated from each other and encouraged not to interact with other children. Even doctors and nurses, who were thought to be a potential repository of seething rubeola viruses or deadly tuberculin bacilli, kept their distance from the infants (Karen, 1977).

Spitz was puzzled, then, as to why these children not only had greatly increased susceptibility to infection, such as otitis media and varicella, regardless of the level of hygiene of the facility, but also had a tragically high mortality rate of 75% in their first year of life (Karen, 1977). The cause of these infants' deaths was termed hospitalism, or failure to thrive, a condition manifesting both depression and lost hope (Karen, 1977). Indeed, in these institutions, admission forms and death certificates were signed at intake for the sake of efficiency (Spitz, 1945). Equally tragic, all infants who survived their first year in the foundling home became, at best, asocial, withdrawn, and anorexic, and at worst, psychotic (Spitz, 1945).

Spitz (1945) observed that the prison nursery, in contrast, resembled an extended playpen scattered with toys and games and children whose mothers were with them most of the day. Prison inmates, guards, and nursery personnel constantly touched and caressed the children, who played rough and tumble games with each other. None of these children became ill on Spitz' watch.

Spitz initially muddled over the contrasting mortality rates, then became the Erin Brockovitch of his generation, the whistle blower on what he called the "evil effects of institutional care on infants" (Spitz, 1957, p. 73). He brought 16 mm cameras into the institutions and documented how isolation from human relational touch destroyed the children's ability to fight infection. His 1947 psychology icon, a silent, black-and-white film entitled "*Grief: A Peril*

in Infancy," recorded the disasters as children succumbed to preventable illness and showed how, for a child, loving touch is necessary for survival. His work spearheaded the widespread substitution of institutional care by foster home care which began in the decade after World War II (Hergenhahn, 2005).

Moreover, while observing the effects of the lack of touch on the infants' physical health, Spitz became curious about the lack of touch on the infants' cognitive abilities. Using an instrument for developmental age and developmental quotient, he was able to quantify cognition in the youngest humans. He found that the infants' developmental quotient after as little as four months of institutionalized care was significantly lower than the developmental quotient on admission (Spitz, 1957). His conclusion? "There is a point under which the mother-child relationship cannot be restricted during the first year without inflicting irreparable damage" (Spitz, 1945, p. 72). According to Spitz, John Watson was wrong in his embracement of the dangers of mother-love.

John Bowlby and Attachment

By the 1950s, research in ethology was suggesting that the mother's touch modulated the infant's physiology: Maternal separation from the infant, with its concomitant lack of touch, resulted in increases of the deleterious stress hormones corticosterone and cortisol in the infant (Hertenstein, 2011). In contrast, a reunification of the mother/infant dyad, and the reinstatement of touch, resulted in increases in beneficial growth hormones, while stress hormones plummeted (Hertenstein, 2011). Researcher John Bowlby was influenced by this animal research, as well as by his training as a Freudian psychoanalyst and his personal clinical observations on disturbed children who had been separated from their mothers during childhood. Many of these children

seemed detached from other children and adults and were unable to form meaningful relationships due to their lack of emotional response and inability to empathize with others. Bowlby (1944) termed these children "affectionless" (p. 49) and concurred with Spitz' observations that a child's relationship with his or her mother can have salubrious effects on cognitive and emotional development. But what was it, exactly, about this relationship that was so salutary? For example, does the baby relate to the mother because she feeds it, as Watsonian behaviorism with its undissembled, pretenseless notion of stimulus and response would have us believe? Or is something else at play?

In the 1930s and 1940s, attachment between children and mothers had been thought of in terms of drive reduction and nutritive rewards: We love our mothers because we love their milk. Decades earlier, Freud (1905) had written that the breast is the infant's first erotic object and that the oral component instinct finds satisfaction by attaching itself to the sating of the desire for nourishment. Anna Freud (1952) concurred stating that the child's attachment was not to the mother, per se, but to her milk, a term she called cupboard-love, writing, "Thus the love of food becomes the basis of love for the mother" (p. 47). These sentiments dovetailed nicely with psychology's faith in Watsonian behaviorism and the conditioned response: The baby is hungry, is supplied with food, and associates the mother with food, thus learning, in due course, that the mother is the source of gratification.

Bowlby eschewed this sterile, behavioral view of stimulus and response. He was convinced of the existence of a singular salient factor responsible for the creation of a healthy mother-infant relationship. His view was shared by psychologists all across Europe and North America who rallied in the fracas to elucidate the elusive factor that was fundamental to the mother-infant bond.

Of all the voices Bowlby heard in this cacophony, the clarion voice of Melanie Klein was, for Bowlby, the most determinate. For Kline, the maternal breast was paramount in the relationship between the mother and the infant, but not necessarily for its nourishment. In *Envy and Gratitude*, she writes: "I would not assume that the breast is to him (sic) merely a physical object. The whole of his instinctual desires and his unconscious phantasies imbue the breast with qualities going far beyond the actual nourishment it affords" (Klein, 1957, p. 5). Klein's writings suggested to Bowlby that there was an innate drive in the infant to attempt to form a relationship with the mother that went far beyond the drive for nourishment and sustenance.

Bowlby (1960) conjectured that infants were biologically programmed to attempt to form a relationship with the mother to satisfy their physiological need for touch and closeness. His fascination with ethology taught him that clinging is a pan-species behavior that occurs even before sucking and appears to be a universal characteristic of primate and sub-primate infants. For species such as marsupials, for example, the newborn emerges from the uterus and immediately clings tenaciously to and climbs up the ventral surface of the mother. The vestige of this response in human infants is every newborn's ability to support his or her own weight with their hands. This ability is part of the Palmer grasp reflex, present from birth until six months of age, in which an infant will tightly close their fingers around an object placed into their hands that strokes their palms (Kliegman, 2003). Bowlby (1960) wrote: "It is plain that in the wild the infant's life depends, indeed literally hangs, on the efficacy of his clinging response" (p. 22). By juxtaposing Klein's writings and ethology's findings, Bolwby concluded that infants have a need for touch and closeness with the mother which is as primary as the need for food, yet distinct from it. He termed this drive the primary object clinging (Bowlby, 1958).

Bowlby then introduced the term attachment behaviors to describe the complex, bidirectional atricial behaviors of the infant-mother dyad which included the primary object clinging drive for touch and closeness (Bowlby, 1958). He observed that, during the first two years of life, the infant displays a range of attachment behaviors, including sucking and crying, which he acknowledged was related to food, as well as clinging, smiling, and following, which were not related to food but, rather, served to ensure proximity to the mother which is necessary for survival (Bowlby, 1958). He noted that crying, for example, can be used to attach the caretaker to the child: A baby's crying is often terminated when they are touched by being picked up and held. The formation, maintenance, and renewal of proximity and touch, therefore, generate feelings of love, security, and joy, while separation brings anxiety, grief, and depression. Thus, attachment behaviors serve the function of binding the child to the mother and the mother to the child (Bowlby, 1958).

Harry Harlow and Contact Comfort

Every undergraduate psychology student knows the story of Harry Harlow and his work with macaques. Harlow not only single-handedly demonstrated the importance of maternal touch to the development of attachment and interpersonal connectedness by changing the way psychologist viewed the mother-infant relationship, but also catapulted Bowlby's concept of the power inherent in touch in the mother-child relationship (Hergenhahn, 2005).

As an ethnologist, Harlow was aware that, in all primates, including the newborn infant, touch is highly developed at birth, much more so than the other senses; as such, it is the sense on which primate infants most depend. In addition, it is the earliest mode of communication in a newborn primate's life, providing an orientation to the world as a whole. Capitalizing on this knowledge, Harlow separated Rhesus macaque infant monkeys from their mothers. These

orphaned monkeys not only appeared to mirror the strong emotional and physical stunting of orphaned and hospitalized infants separated from their mothers documented by Spitz years earlier, but also showed enduring emotional and cognitive problems that continued into adulthood.

Harlow also noticed that infant macaques, as young as one day old, who were separated from their mothers became extremely attached to the folded gauze diapers which covered the floor of their cages: They would lie on them, grip them in their tiny fists, and throw temper tantrums if they were taken away to be replaced for sanitary reasons (Harlow, 1958). Such need for contact, Harlow surmised, is reminiscent of the devotion often exhibited by human infants to their pillows, blankets, and soft, cuddly toys (Harlow, 1958). Harlow was impressed by the possibility that, above and beyond the bubbling fountain of breast or bottle, contact comfort might be a very important variable in the development of the infant's affection for the mother (Harlow, 1958).

Harlow then created two types of surrogate mothers in order to test the relative importance of the variables of contact comfort and nursing comfort. The first was made out of a block of wood, covered with a rubber sponge, and sheathed in tan terry cloth with a light bulb behind it which radiated heat. The result was a mother, "soft, warm and tender, a mother with infinite patience, a mother available 24 hours a day, a mother that never scolded her infant and never struck her baby in anger" (Harlow, 1958, p. 680). The other was "deliberately built less than the maximal capability for contact comfort" made of wire-mesh warmed with radiant heat which provided milk (Harlow, 1958, p. 680). According to Harlow (1958), the latter mother's body differed in no essential way from that of the cloth mother surrogate other than in the quality of contact comfort which she could supply. The monkey infants would cuddle for 16 to 18 hours

a day with the fluffy, comfy mother and refuse to leave her, reluctantly going to the wire mother for brief periods of nourishment (Harlow, 1958).

Moreover, when a frightening stimulus, such as a mechanical drumming bear, was brought into the cage, the monkey infants would screech in fear and scatter to the cloth mother for protection and comfort. The monkey's affectionate ties to the cloth surrogate were sustained even after long separations. And when the infant monkeys were placed in a novel environment, a room filled with a variety of stimuli known to arouse monkey interest, they always rushed initially to the cloth mother, clutching her tightly until their fear dissipated; only then, did they use the cloth mother as a source of security, a base for explorations (Harlow, 1958). They would explore and manipulate a stimulus, then return to the mother before adventuring again into the strange new world. If the mother were absent from the room, they would freeze in a couched position, vocalizing, crouching and rocking, frantically clutching their own bodies (Harlow, 1958).

In contrast, the wire monkeys, described by Harlow (1958) as biologically adequate but psychologically inept, and their milk failed to establish any bonds in the young. Harlow (1958) concluded that contact comfort is a variable of overwhelming importance in the development of affectionate relational response, whereas lactation is a variable of negligible importance, a finding completely contrary to any interpretation of derived drive in which the mother-form becomes conditioned to hunger-thirst reduction. Harlow surmised that the disparity was so great as to suggest that the primary function of nursing as an affectional variable is that of insuring frequent and intimate body contact of the infant with the mother.

The findings of Harlow, and Bowlby before him, launched relational touch as the prime contender for that elusive, determinate factor in the mother-infant bond. In the macaque infants,

Harlow (1958) recognized an innate need for physical contact with the mother, compelling and propelling them to be in touch and cling to her. He generalized these attachment behaviors to other primates, including humans. In *The Nature of the Child's Ties to his Mother*, Harlow (1958) wrote:

> Grounded in the everyday reality of touch and affection, the baby bonds with the touch and is motivated to secure that bond using a plethora of behaviors including clinging, crying, smiling, babbling – all part of the instinctive way a child tries to bind his parents tightly. (p. 72)

Thus, according to Harlow, affectionate relationship ties were not based on nursing. Rather, relational touch proved far more important to the mother-infant bond. Harlow (1958) reasoned that, at least in the macaque, "love grows from touch" (p. 681).

Chapter 4: The Biopsychosocial Impact of Relational Touch on Development

The Hippopotamus

This is the skin some babies feel

Replete with hippo love appeal.

Each contact, cuddle, push, and shove

Elicits tons of baby love. – Harry Harlow, 1958

The Neurophysiology of the Skin

The skin is our body's largest organ, a fact that underscores its functional importance to our species and our humanness. All of us adults have skin with a surface area of approximately 18,000 square centimeters (Gallace & Spence, 2010). Its 2.5 millimeter thickness (Gallace & Spence, 2010) is designed to don each of us with a Kevlar-like body armor of protection against our external environment's ubiquitous threats, such as high and low temperature, electrolyte imbalance, and microbial invaders. My skin and yours weighs five to six kilograms and constitutes approximately 6% of our total body weight (Gallace & Spence, 2010).

As such a prominent organ, our skin has enormous functionality and supports all of our major body systems including our hematological and our musculoskeletal systems. More surprisingly, perhaps, is the fact that our skin is a major neuroendocrine organ for stress regulation (Hertenstein, 2011), independent of the hypothalamic-pituitary-adrenal axis. As such, this cutaneous neuroendocrine function of our skin plays a major role in our psychosocial well-being throughout our lifespan through its production of myriad hormones and neurotransmitters such as cortisol and serotonin.

The Neurophysiology of Touch in the Embryo and Fetus

When we are embryos, very soon after our conception, our skin is one of our very first organs to develop. Our primitive ectoderm morphs into a distinct epidermis and dermis as early as the first or second weeks of embryonic life, and cutaneous nerves, laden with hair-like projections, can be identified by the time we, as embryos, are 15 weeks old (Hertenstein, 2011). It is noteworthy that not only our skin, but also our brain, form from this same primitive ectoderm. The skin, as an important sensor of our external and internal world has, prompted some to call the skin our brain on the outside.

As we develop into fetuses, we begin to navigate our physical world of our mother's womb, and rely heavily on our sense of touch to give us feedback on our environment. As we continued to develop prenatally, our skin becomes part of our somatosensory system which connects our sense of touch with the primary sensory cortex of the parietal lobe of our brain. It is innervated and punctuated by dendrites which are long, sinewy neural filaments which specialize in detecting even the tiniest, teeniest touch sensation on the skin. Once stimulated, these dendrites convert the mechanical stimulus of touch into electrical signals which move at the speed of electricity to the dendrites' cell body which resides in the dorsal root ganglia of the spinal cord. It's the dorsal root ganglia that then reroutes the signal to the somatosensory cortex of our brain where the perception of all touch, including relational touch, is processed.

While tactile perception begins with the activation of receptors embedded in our skin, the extraction of meaningful information from, say, a stroke of our arm or a pat on our head, requires that these signals be processed and interpreted in the brain. It is thus our brain that gives touch valenced meaning by linking it to stored, historical information that has been positively or negatively associated with touch. From the comforting experience of being touched by one's

spouse or the anxiety experienced when being unexpectedly nudged by a stranger, even the briefest of touches has hedonic meaning that informs our emotional well-being (Gallence & Spence, 2010).

Touch perception, therefore, is a multistep process and there are many levels in which a genetic mutation could perturb our sense of touch. As such, it is fascinating to me that there are no identified human genetic disorders that lead to a total attenuation of touch sensation from birth. Moreover, no genetic mutations that specifically affect touch have been identified (Hertenstein, 2011). In comparison, genetic mutations that lead to congenital deafness and blindness are multiple and well-studied (Hertenstein, 2011). The fact that there are no congenital touch insensitivities known in us as newborns suggests that the sense of touch is so fundamental to our development and survival that a total, congenital loss of touch is likely to be lethal to our development as embryos or fetuses.

The Biopsychosocial Impact of Relational Touch on the Maternal-Infant Dyad

The expression of relational touch in the mother. As psychologists, we tend to think of development as biopsychosocial growth and maturation that occur in children and adolescents. But, if we consider the concept more broadly, we would concur that development occurs in all phases of the lifespan from conception to death. During the nine months of pregnancy, for example, a woman undergoes developmental physical and psychological changes that prepare her for her role as mother and the expression of maternal behavior. Thus, following parturition, from the moment our mother first lays eyes on us, she engages in an emotional and behavioral repertoire comprised of a choreographed dance of relational touch, including cradling us close to her chest while rocking us and gazing at our face and body (Feldman, 2011).

It is biopsychological developmental changes in our mother that inform her behaviors which includes relational touch. Not only do her brain levels of OT rise precipitously during pregnancy and puerperium, but also, the absolute level of the rise positively predicts the amount of relational touch we receive from her. In addition, this rise in OT levels allows our mother (Kaitz, 1993), as well as our father (Kaitz, 1994), to be uniquely sensitive to us as newborns. Indeed, our parents can recognize us as their own newborns from other unfamiliar newborns as early as five hours after we are born by a mere touch of the dorsal surface of our hands (Kaitz, 1993). Thus, our parents come to know us, individually and uniquely as their own through relational touch, as they learn the special tactile characteristics of the nooks and crannies of our singular skin during the course of daily feeding and nurturing.

Interestingly, mothers who give birth prior to the 37th week of gestation have less time to receive the full biopsychosocial brain development that prepare them for the expression of relational touch compared to women who give birth at 40 weeks gestation. Consequently, premature infants receive less maternal relational touch than their term counterparts (Feldman, Weller, Zagoory-Sharon, & Levine, 2007). Like Spitz's (1945, 1947, 1957) findings decade earlier, infants who are deprived of relational touch behave differently than those who are not so deprived, demonstrating highly withdrawn behavior and are at risk for future psychopathology (Feldman, 2012). This reduced relational touch, in combination with the compromised physiology of the premature infant, place preemies at risk of developing both emotional and behavioral problems as toddlers (Weiss, 2005). Breast-feeding is often encouraged in premature infants, as relational touch during breast-feeding not only increases OT levels further, but also increases overall maternal relational touch (Feldman, 2012) resulting in higher neurobehavioral maturation of breast-fed preemies on a neonatal behavior assessment scale (Brazelton, 1973).

From all we know about relational touch, is it any wonder that touch interventions, comprised of instructing mothers of premature infants in massage therapy techniques, have a salubrious effect on premature infants comprised of improved emotional regulation, reduced the length of hospital stay, and accelerated motor development (Field, 1995)?

The biopsychosocial developmental impact of relational touch on the child. As a newborn, our own serum OT rises when we receive relational touch from our mother (Feldman, 2012) and this rise is related to our own biopsychosocial developmental maturation. According to Feldman, relational touch not only establishes the basis for interpersonal mutuality between our mother and ourselves in first hours and days after our birth, but also contributes positively to our socio-emotional growth, as those of us who experience more relational touch from our mothers exhibit less distress and increased smiling as newborns compared to those of us who are touched less often (Bystrova et al., 2009). According to Bystova et al., this relational touch conveys security and tenderness and aids in newborn reduction of stress and distress, while promoting emotional regulation, arousal, and attention.

Moreover, the positive contributions of relational touch to our socio-emotional growth last well beyond the newborn period. By three months of age, we infants begin to engage in synchronous interactions with our parents involving the coordination of nonverbal social signals including relational touch, affective expression, and vocalization. Touch synchrony (i.e., the coordination of our parents' relational touch with our own social gaze at three months) is correlated with lower externalizing and internalizing symptoms when we are 24 months old (Feldman, Eidelman & Rotenberg, 2004). In addition, the quantity and quality of touch synchrony between us and our mothers predicts our expression of empathy towards others when we are five years old (Feldman, 2012). Moreover, positive effects of touch synchrony in our first

six months of life lasts throughout our growth and development and is correlated with social competence with peers in kindergarten (Feldman & Masalha, 2010), lower behavioral problems in preschool years (Feldman & Masalha, 2007), and better emotional adjustment and lower rates of depression in adolescence (Feldman, 2010).

Chapter 5: Attachment Theory as Developmental Theory

Bowlby's (1958) attachment theory has experienced a powerful resurgence in both the developmental psychology and neurobiological psychology literature over the last decade. According to this literature, attachment theory is a developmental theory which posits that certain pre-verbal communications, such as touch from our mother in the earliest stages of our lives, leave a neurological trace that indelibly sculpts us in fundamental ways (Cozolino, 2010) of experiencing the world that abide for the remainder of our lifespan.

Newborn development is, therefore, not a unilateral, unfolding process reminiscent of a pupa encased alone in a chrysalis that metamorphoses into a butterfly. Rather, it is a dyadic and dialogical process that is triggered epigenetically by certain pre-verbal attachment communications between two human beings including, but not limited to, synchronized relational touch, which serve to regulate the infant's post-natally developing central and autonomic nervous systems. In this epigenetically choreographed interaction between mother and child, the more the former contingently provides these pre-verbal attachment communications for her infant in periods of social engagement, the more she allows him or her to recover quietly in periods of disengagement; and the more the mother attends to the infant's reinitiating cues for re-engagement, the more synchronized their interaction becomes (Schore, 2012). Moreover, in moments of interactive repair, the mother who has mis-attuned by inadvertently withholding relational touch, for example, can regulate the infant's negative state by accurately re-attuning in a timely manner through the re-initiation of relational touch or through other pre-verbal attachment communications (Schore, 2012). According to Schore (2012), this preverbal maitrix, of which touch is a salient component, comprises attunement,

mis-attunement, and re-attunement which are the fundamental developmental building blocks of a child's "psychological birth" (p. 32). Thus, the regulation of the developing brain occurs in the context of a relationship to another brain (Schore, 2003b).

Attachment and developmental theories further state that the essential task of the first year of human life is the creation of a secure attachment bond of emotional communication between the infant and the mother. Our right hemisphere, dominant over our left hemisphere in the first 18 months of our life, and not our verbal left hemisphere, is attachment's handmaiden. It specializes not only in the processing of emotion, facial recognition, and attention which are so important in mutual gaze episodes, but also figures prominently in the perception of tactile information (Bourne & Todd, 2004, p. 22-23). These hedonic pre-verbal attachment communications, including relational touch, which are processed in the right brain and bind us to our mother, continue throughout our life to be a primary medium of intuitively felt affective-relational communications between us and other people; as such, they feature predominately in our subjective appraisals of our interpersonal relationships (Orlinsky & Howard, 1986, 0343.)

Touch is but one of the pre-verbal attachment communications, albeit an important one, that is utilized by the mother to create an attachment in the mother-infant dyad. Other pre-verbal behaviors, all of which are processed in the right brain, including maternal presence, attention, gaze, prosody, tone and pitch of voice, attunement and unconditional positive regard, are part of the epigenetically determined repertoire of maternal behaviors which is used not only to forge secure attachment, but also to impact physiological and emotional homeostasis and regulation.

Part II: Clinical Considerations on Relational Touch in Psychotherapy

Chapter 6: History of the Freudian Interdiction on Relational Touch in Psychotherapy

Young Sigmund Freud trained as a physician specializing in neurology at the prestigious University of Vienna from 1873-1881 (Gay, 2006). By 1886, he had a burgeoning medical practice at Rathausstrasse 7 in Vienna (Gay, 2006). There he utilized the clinical technique of hypnosis, which he had gleaned from his mentor Jean-Martin Chacot at the Hospice de la Salpetriere in Paris, for the treatment of what was then known as hysteria and other conversion phenomena (Gay, 2006). His experience of treating neurological symptoms of the extremities by focusing on the mind rather than directly on the extremities no doubt informed his early formulation of his theory of the mind/body interface first published with Joseph Breuer in 1895 in *Studies on Hysteria* (Freud & Breuer, 1895/1974).

Ego Development is Dependent on Bodily Sensation

Thus, it is unsurprising that Freud came to initially understand the development of the ego as informed by the individual's earliest experiences of bodily sensations. In his early writings, Freud (1920) described the ego as a "modified portion" of the id that can perceive the empirical world (p. 29). According to Freud, the body is instrumental in bringing about the formation of the ego and differentiating it from the id:

> A person's own body, and above all, its surface, is the place from which both external and internal perceptions may spring. It is seen like any other object, but to touch it yields two kinds of sensations, one of which may be the equivalent to an internal perception …The ego is first and foremost a bodily ego ….ultimately derived from bodily sensations… and may thus be regarded as a mental projection of the surface of the body. (p. 16)

Freud's earliest conception of the mind, therefore, regarded ego development as dependent, in part, on the bodily sensation of touch.

The important developmental implication of Freud's early theory of mind and body is that the lack of certain body sensations, such as touch, will limit ego development (Smith, Clance, & Imes, 1998). (Recall that Spitz observed failure to thrive in infants in foundling homes in which infants were deprived of touch decades later.) Doesn't it follow that, if ego deficiency occurs due to inadequate ego-forming body experiences, then talk-therapy-based analysis and insight might be inadequate to bring about change? Even the skeptic of the use of relational touch in psychotherapy would admit that, in cases such as these, the provision of body experiences, such as touch, may be the preferred mechanism of change (Smith et. al., 1998).

Sigmund Freud's Use of Relational Touch in Psychotherapy

As a physician, Freud was, no doubt, comfortable with the use of touch for diagnosing, healing, and reassuring. Thus, his decision to utilize touch in his work with individuals with conversion disorder was not only seamless, but also served to lay groundwork for a theory of the mind and its illnesses that would rely heavily on touch in order to provide ego-building experiences (Smith, Clance, & Imes, 1998).

Indeed, in his early work, prior to his development of his Oedipal theories, and consistent with his understanding of ego development, Freud, as well as his partner, Josef Breuer, freely employed relational touch during their therapeutic interactions to mitigate somatic symptoms. Freud's techniques, which included stroking of the head or neck adjunctive to the process of free association, were described in his collection of clinical observations, *Studies on Hysteria*, in 1895:

> My assumption was that my patients knew everything that was of any pathological significance and that it was only a question of obliging them to communicate it. Thus, when I reached a point at which, after asking a patient some question such as: "How long have you had this symptom?" or "What was its origin?," I was met with the answer: "I really don't know," I proceeded as follows. I placed my hand on the patient's forehead or took her head between my hands and said: "You will think of [the answer] under the pressure of my hand. At the moment at which I relax my pressure you will see something in front of you or something will come into your head. Catch hold of it. It will be what we are looking for." …On the first occasion on which I made use of this procedure, I myself was surprised to find that it yielded me the precise results that I needed. It has always pointed the way that the analysis should take. (Freud & Breuer, 1895/1974, p. 173-174)

According to Freud, his reliance on relational touch in psychotherapy was "unqualified" (Freud & Breuer, 1895/1974, p. 223). Freud wrote:

> In every fairly complicated analysis, the work is carried on by the repeated, continuous, use of the procedure of pressure on the forehead…. Sometimes this procedure, starting where the patient's tweaking retrospection breaks off, points the further path through memories of which he has remained aware; sometimes it draws attention to connections which have been forgotten; sometimes it calls up recollections which have been withdrawn from association many years… And causes thoughts to emerge which the patient will never recognize as his own…and he becomes convinced that it is precisely these ideas which lead …to the removal of his symptoms. (Freud, 1955, p. 224)

Freud later modified his stroking technique by placing his hands on the patient's forehead, reminiscent of the recovery of memories through hypnosis, to facilitate the emergence of memories and enrich the process of free association (Mintz, 1969). Moreover, he also allowed patents to touch him (Smith et. al., 1998). Through all these techniques, Freud utilized touch to facilitate emotional expression adjunctive to the process of talk therapy (Smith, 1998).

Sigmund Freud's Interdiction on Relational Touch in Psychotherapy

As Freud's theories turned away from the earliest phases of infant development and towards Oedipal concerns, drives, and the dynamics of transference, he abandoned the use of relational touch in psychotherapy and began to avoid touching patients "in any way…. which might be reminiscent of hypnosis" (Freud, 1904, p. 250). An exploration of both the historical context of the development of Freud's thoughts on the use of relational touch as a technique, as well as a discussion of his theoretical concerns that caused him to abandon relational touch, is helpful to an understanding of his eventual proscription against the use of relational touch in psychotherapy.

A historical context. Freud developed his theories during the late-19th through the mid-twentieth century within a cultural context of Victorian sexual mores. Freud's use of relational touch in his work was, therefore, a challenge to the prevailing sexual cultural climate (Smith, Clance, & Imes, 1998). In a concerted effort to establish a respectable science of psychotherapy which was acceptable to Viennese society, Freud's interdiction on relational touch in psychotherapy likely reflected his understanding that any physical contact in the therapeutic dyad could be misconstrued as sexually seductive or aggressive (Mintz, 1969) and therefore not only put into question his reputation as a respectable scientist, but also jeopardize the standing of his theories of psychoanalysis as a respectable science.

Some theoretical considerations. As Freud's theory of the mind began to incorporate his understanding of the Oedipal complex, his emphasis turned to drives, including sex and aggression, and away from developmental needs. It was from this theoretical perspective that the proscription against using relational touch as a therapeutic technique emerged. By 1913, Freud had begun to understand the mind through the concept of the pleasure principle and surmised that the use of relational touch would gratify the patient's sexual drive. This gratification would thereby not only interfere with the therapist-client transference, but also potentially take the patient's energy away from the primary task of analysis, viz., to make unconscious material conscious by means of free association and analysis of the transference with the goal of resolving the transference neurosis (Smith, et. al., 1998). Freud therefore urged the therapist to eschew client gratification; rather, he encouraged the therapist to take on the role of a blank screen—impersonal, objective, and non-judgmental—onto which the patient's intrapsychically generated childhood fantasies could be displaced and projected.

According to Freud, therefore, the use of relational touch by the therapist had the potential to stymie the purposes of psychotherapy and gratify the patient's desires, interfere with the transference neurosis, lessen the patient's energy and lead, ultimately, to stagnation in the sessions. Alternatively, refusal of the therapist to touch the patient in therapy would aid in forcing infantile sexual wishes into articulatory awareness and, thereby, facilitate their renunciation. Having the patient lie on the couch without seeing or being touched by the therapist further served this stance of non-gratification. Moreover, this hands-off approach included refraining from any physical contact, including handshakes or hugs, during the greeting and departure phase of the session. Freud's binary concept of touch, which rendered it as either

sexual or aggressive, considered no other meanings of touch. Relational touch, therefore, became solely a sexual or aggressive event that interfered with therapy.

Chapter 7: A History of Psychotherapies that Utilize Relational Touch as a Primary Therapeutic Modality

Sandor Ferenczi and the Use of Relational Touch in Psychotherapy

Not all psychotherapists agreed with Freud's interdiction on the use of relational touch in session. Sandor Ferenczi, a Hungarian psychoanalyst (1873-1933) and a member of Freud's inner circle (Hoffman, 2003), for example, not only threw down the gauntlet on Freud's proscription on touch, but also attempted to shatter Freud's rendition of the analyst as a blank slate. He envisioned the therapist not as a neutral observer but, rather, as a warm, welcoming, co-participant in the therapeutic dyad. Specifically, he emphasized the significance of the transference with one salient characteristic– that of tenderness (Hoffman, 2003). According to Ferenczi, the therapist offered the client a setting of security and empathy (Hoffman, 2003). Ferenczi's writings thus informed not only Carl Rogers' development of his person-centered therapy, but also influenced the writings of contemporary relational psychoanalysts (Hoffman, 2003).

In response to the lack of therapeutic impact of Freudian techniques on certain individuals who, according to Ferenczi, had the genesis of their presenting problems in pre-Oedipal events, he developed what he termed activity techniques which incorporated relaxation exercises and relational touch in the session (Smith, et. al., 1998). Ferenczi's experiences led him to believe that the use of relational touch in psychotherapy could lead directly to feelings which unearth the client's pre-Oedipal childhood memories (Smith, et. al., 1998). Ferenczi, therefore, touched selected clients who were victims of early parental neglect, believing that the use of relational touch could provide reparative healing as a corrective emotional experience by helping the client to tolerate the pain that was being characterologically defended against.

Freud was initially supportive of Ferenczi's use of relational touch in his therapeutic technique. When he learned that Ferenczi was romantically involved with two of his patients, however, he withdrew his support. Once again, Freud was concerned about a possible censure by Victorian society (Hunter & Struve, 1998) on a psychoanalytic technique that included relational touch, writing:

> A number of independent thinkers in the matter of technique will say to themselves: Why stop? Certainly one gets further when one adopts "pawing" as well….And then bolder ones will come along who will go further to peeping and showing, and soon we shall have accepted in the technique of analysis the whole repertoire of…petting parties, resulting in an enormous increase of interest in psychoanalysis among both analysts and patients. (Jones, 1955, p. 163)

To distance himself as far as possible from the use of relational touch in therapy, Freud publically expelled Ferenczi from the ranks of orthodox psychoanalysis.

Wilheim Reich and the Body-Oriented Therapies

Although Ferenczi's conflict with Freud, no doubt, discouraged most psychoanalysts from challenging contemporary dogma regarding the use of relational touch in psychotherapy, Wilheim Reich, the founder of body-oriented therapies, was a notable exception (Hunter & Struve, 1998). Reich was Ferenczi's student, and when Ferenczi fell out of favor with Freud, Reich lost his own position in the inner circle.

Undaunted by this discrediting, Reich directly challenged Freud's proscription of the use of touch in psychotherapy by arguing that ego development and growth come about through experiential learning during psychotherapy, rather than through analysis. Reich's writings emphasized Freud's own belief that it is the lack of body sensations, including touch, which

limits ego development. If the patient has an ego deficiency because of inadequate ego forming body experiences, Reich reasoned, wouldn't it follow that analysis and insight into the problem would be inadequate to bring about change (Reich, 1949)?

Basing his theories on Freud's structural model of the psyche, Reich postulated that the body harbored free-floating anxiety which is generated by the conflict between the instinctual demands of the id and the counterdemands of the social world. This psychological conflict manifests physically in the body as muscular rigidities which he termed character armor (Reich, 1949). Reich believed that the therapist could visualize neuroses in this character armor and, therefore, diagnose and treat the patient by palpating these rigidities to discern the pattern of muscular tension which was holding affect and expression at bay (Reich, 1949). Reich's treatment of neuroses utilized relational touch through brief, heavy pressure, called orgonomic massage, which not only softened the muscular armor, but also released repressed memories, thereby collapsing the neurotic structure. Reich was thus the first psychotherapist to develop the systemic use of relational touch in psychotherapy. In so doing, he set precedence for the therapist to have direct physical contact with the patient as a primary modality of psychotherapy (Smith, Clance, & Imes, 1998).

Reich's willingness to deconstruct the barriers and restrictions to relational touch in therapy in the mid-twentieth century not only led to a softening of the taboos against touch in psychotherapy, but also became a progenitor for other body-oriented psychotherapies developed in the latter half of the 20th century. These Neo-Reichian, body-oriented psychotherapies continue to share an ideology that conscious or unconscious repressed emotions reside in muscle fibers creating chronic muscle tension which can be released by the psychotherapist through the use of relational touch.

Alexander Lowen and Bioenergetics

One notable example of a neo-Reichian, body-oriented psychotherapy is Bioenergetics which was founded by Alexander Lowen, a student of Reich's. According to Lowen, a person's personality, or character style (Lowen, 1974), was a function not only of character armor, but also of "the way a person moves and holds the body" (Lowen, 1975, p. 104). An individual may have one or more character styles, viz., schioid, oral, psychopathic, masochistic, or rigid (Lowen, 1975). The diagnosis of character styles occurs through the therapist's observation of the patient in a bathing suit while standing and walking during session.

Lowen believed that blockages to the flow of energy generated by a patient's movements were the etiology of disturbances in an individual's personality. Treatment of personality disorders, therefore, consisted of the therapist's use of relational touch to palpate tension in the patient's musculature using deep-massage techniques to discern areas where the flow of energy was blocked. Lowen wrote:

> The procedure is to get in touch with tensions in the body… and release the contractions by the therapist using deep massage to apply pressure to the abdominal muscles, thereby freeing the emotions previously blocked…which will provide the patient with an interpretation of the memories and emotions which emerge from the unconscious. (Lowen, 1974, p. 132)

More recently, other somatically-based psychotherapies have been introduced. The Rubenfeld Synergy Method, developed in 1996 by Ilana Rubenfeld, focuses on the mind-body as a continuum through its integration of both relational touch and talk therapy. Like Reichian therapy, it utilizes relational touch to identify areas of muscular tension which can bring into consciousness memories of experiences held somatically in the body (Medina, 2012). As clients

come to understand emotional undercurrents of their experiences held in their body (Medina, 2012), they verbally express their experiences in talk therapy. In this way, somatic and emotional work is integrated and addressed simultaneously (Medina, 2012).

Chapter 8: Some Benefits to the Use of Relational Touch in Psychotherapy

Much of the existing literature that examines the use of touch in psychotherapy is written by psychotherapists who have witnessed the benefits and pitfall of the use of relational touch in their own practices. Consequently, the studies are often anecdotal or have a small sample size (Hunter & Struve, 1998). Regardless of this limitation, useful generalizations can be gleaned through a perusal of the literature about the benefits of the use of relational touch in psychotherapy on three salient and interrelated aspects of psychotherapy: the fostering of a therapeutic alliance, the client's willingness to self-disclose, and the generation of a sense of safe space during session.

The use of relational touch in psychotherapy informs the therapeutic alliance through an enhancement of the client's appraisal of the therapist's credibility, prestige, status, and possession of knowledge (Alagna, Whicher, Fisher & Wicas, 1979; Hubble, Noble, & Robinson, 1981; see Stockwell & Dye, 1980, for dissenting findings). Horton, Sterk-Elifson, and Emshoff (1995), for example, reported that 69% of 231 clients who participated in psychotherapy in which relational touch was a part of the therapeutic modality indicated that the use of relational touch fostered a stronger bond with, as well as a deeper trust of, the therapist as measured by the Working Alliance Inventory (WAI). This is of importance as the results of the WAI, especially the client's perspective on the therapeutic alliance, have been shown to predict treatment outcome (Horvath & Greenberg, 1994).

The use of relational touch in psychotherapy also increases client's willingness to self-disclose by enhancing awareness of bodily sensations which, according to Hunter and Struve (1998), facilitates access to, as well as exploration and resolution of, repressed emotional experiences. Mintz reported that the use of relational touch can bypass clients' defenses and

access the preverbal transference in clients with resistance against intense emotional experiences. For example, the therapist's placing a hand on the shoulder of a client overcome with shame and self-loathing may convey a sense of acceptance beyond the ability of language to do so. Mintz (1969) termed this use of relational touch symbolic mothering highlighting its similarities to the right-brain mediated, preverbal communications of the mother-infant dyad.

The literature also suggests that the use of relational touch in psychotherapy can enhance a client's sense of safety (Hunter & Struve, 1998) which may aid not only in the willingness to explore the self, but also in managing emotionally difficult material (Horton, et. al., 1995). In this way, the use of relational touch in psychotherapy may foster the creation of a therapeutic holding environment as first described by Winnicott in 1958.

Daniel Winnicott and the use of relational touch in psychotherapy. As a physician, Winnicott, like Freud, was no doubt comfortable with the use of touch for diagnosis, treatment, and reassurance of the patient that she was in the hands of an expert. In his work as a psychotherapist, Winnicott used relational touch in psychotherapy to enhance clients' sense of safety, an intervention which he termed the mutuality of experience (Winnicott, 1975). According to Winnicott, this technique is modeled on the mutuality of experience of the mother-infant dyad in which "the two communicate in terms of the anatomy and physiology of live bodies" (Winnicott, 1986, p. 258).

Winnicott described his use of relational touch in psychotherapy in his treatment of a 40-year-old female who was referred to him after six years of analysis with no symptomatic improvement. In his 1958 compilation of essays titled *Collected Papers: Through Pediatrics to Psychoanalysis*, he describes his techniques used to create the perception of a safe physiological and psychological holding environment during session:

> The detail I have chosen for the description of this case is the absolute need this patient had, from time to time, to be in physical contact with me. She had feared to make this step with her female analyst because of the homosexual implications. Eventually it came about that she and I were together with her head in my hands. Without deliberate action on the part of either of us, there developed a rocking rhythm. The rhythm was a rather rapid one, about 70 beats per minutes, reminiscent of a heartbeat, and I had to do some work to adapt to this rate. Nevertheless, there we were with mutuality expressed in terms of a slight but persistent rocking movement. We were communicating with each other without words. This experience, often repeated, was crucial to the therapy. (Winnicott, 1975, p. xxii)

According to Winnicott (1975,) "psychotherapy is done in the overlap of two play areas, that of the patient and that of the therapist. (p.72)" Winnicott often used right-brain mediated, relational touch during therapy to aid the client in self-regulation when overwhelmed with intensive negative affect. In so doing, he resisted the more common impulse among therapists to regulate a state of right-brain psychobiological disequilibrium by attempting to create a linear, rational environment through the use of the therapist's verbally-dominant, left hemisphere. Winnicott was no doubt aware of the power of holding the right-brain-to-right-brain context of emotional communication, a technique he may have garnered through in his work as a pediatrician treating pre-verbal, distressed children.

Chapter 9: Some Pitfalls in the Use of Relational Touch in Psychotherapy: Cultural Considerations

Given these benefits of the use of relational touch in psychotherapy, isn't it regrettable that relational touch is not part of most psychotherapists' armamentarium? Admittedly, few of us are as bold as Ferenczi and Lowen who iconoclastically moved towards the use of relational touch and away from the standard of care of their time. This writer acknowledges that the field of contemporary psychotherapy is embedded in a cultural, political, and ethical matrix which makes the use of relational touch in psychotherapy fraught with stumbling blocks which, perhaps unfortunately, overshadow its benefits. These potential deterrents include the Western cultural power differential inherent to the therapist-client dyad and the diverse meanings of touch in Western subcultures.

Western Culture and the Problem of Power Dynamics

Because culture is a vital lens through which relational touch is ascribed meaning, it may be difficult for the psychotherapist to predict and to fully understand how the presence or the absence of relational touch in psychotherapy may be perceived and received by the patient. This may be especially problematic when the culture of origin and/or the local culture of the therapist and the client differ.

In Western cultures over the centuries, touch has been iconically used to demonstrate a flow of power from higher to lower status. Consider Michelangelo's 1512 Sistine Chapel fresco titled "*The Creation of Adam*." Chronologically the fourth in a series of panels denoting episodes from the book of Genesis, this fresco depicts the bearded, father-figure of the Hebrew God regaled in grandiloquent, flowing robes and surrounded by servile archangels with an arm outstretched to touch the fingers of a young, naked, and vulnerable Adam. This power of

divinity, reflected by 6000 square feet of sheer glory at the apex of the Capella Sistina of the Apostolic Chapel, flows downward to breathe life into the mere mortal and, thus, form him in the image of the creator.

A century later, during the Middle Ages, this meaning of touch to denote the flow of power from a higher to a lower status was used in the British accolade, a ceremonial rite of passage that conveyed knighthood. Originally, knighthood was conferred on the conferee through a body blow, or colee, given with a monarch's naked fist as a forceful box on the ear or neck. This blow was later substituted for by the use of a gentle stroke of the monarch's flat part of the sword against the side of the candidate's neck, a custom that morphed into the modern-day ritual termed dubbing. In contemporary England, dubbing is performed by the monarch's touching of the sword on the candidate's right and left shoulder. Following the second tap, knighthood is conferred, as a portion of the monarch's power has symbolically been transferred to the candidate.

Therapists should be aware that Western culture conceptualizes health-care services, such as psychotherapy, as vertically structured social organizations in which energy flows from the more powerful to the least powerful and relationships are defined from top to bottom (Hunter & Struve, 1998). As such, a power differential is inherent to the nature of the therapist-client dyad with the therapist holding the relatively superior power position. This differential is due not only to the therapist's extensive formal education and repository of knowledge not held by the client, but also because the client has sought out the therapist for assistance. The therapist's awareness of the dynamics of power that operate both overtly and covertly in the clinical setting should, therefore, inform any discussion of the use of relational touch in psychotherapy.

Regrettably, these power dynamics, inherent to the therapist-client relationship, muddy the waters of the use of relational touch in psychotherapy. For example, clients who have experienced physical or sexual abuse in the past or present may feel threatened by the therapist's offer to use relational touch as a therapeutic modality. For these individuals, touch may have a variety of idiosyncratic meanings including intrusion and victimization, which may be difficult for the psychotherapist to fully predict or understand.

The use of relational touch with clients with a history of trauma and insecure attachment merits special attention. According to Lawry (1997), the therapist's offer to use relational touch with sexually abused clients may provide unique therapeutic communications which combat feelings of shame [("You are touchable")], believing that all touch is sexual [("Touch can feel safe and nurturing")] and feelings of powerlessness [("You can say yes or no to touch.")] (p. 205). Unfortunately, it may be difficult for the therapist to ascertain which clients have sufficient ego strength to accept and internalize any beneficial use of touch (Lawry, 1997) and which may be further traumatized. For example, a client's "adults-self" may be able to assert, process and negotiate power easily; but if it is the client's "child-self" that is receiving the relational touch, it is the ego strength of the child's self that needs to be assessed and attended to (Lawry, 1997, p. 206).

Although a client's insecure attachment informs the use of relational touch in psychotherapy, it is not an absolute contraindication to its use (Hunter & Struve, 1998). Because of the client's potential vulnerability, however, the plan to incorporate relational touch in psychotherapy must be thoroughly formulated to be in the client's best interest. For example, the use of relational touch with clients with a history of childhood physical abuse should not occur until a strong therapeutic alliance is established through talk therapy and a tolerance for the

experience and expression of deep affect has been laid. Once this has been accomplished, the use of relational touch can "evoke, address, and correct" experiences common to insecure attachment such as "deprivation, neglect, and violation" (Cornell, 1997, p. 33).

Because traumatic memories are encoded in our sensorimotor system as kinesthetic sensations and images (Herman, 1992), relational touch used in the context of client empowerment (Hunter & Struve, 1998) may be of more benefit to trauma survivors than talk therapy. Studies have shown that the use of relational touch with trauma survivors yields results similar to trauma-related outcomes with CBT (Bremmer, 2002) with the added benefit that clients report that the use of relational touch helps them not only to feel touchable, but also to identify acceptable forms of touch. Horton, et. al. (1995) reported that 71% of clients with a history of sexual and physical abuse and neglect who received the intervention of relational touch in psychotherapy experienced "repaired self-esteem, trust, and a sense of their own agency, especially in setting limits and asking for what they need" (p. 450). In addition, the clients with a history of sexual abuse in his study were more likely to attribute a corrective role to relational touch and to report feeling touchable and lovable as a result of the intervention compared with clients without a sexual-abuse history,

Prior to the use of relational therapy with clients with insecure attachment, clients are encouraged to not only practice boundary-setting exercises, but also to participate in the formulation of a written treatment plan (Hunter & Struve, 1998), as studies have shown a positive correlation between a client's perception that they are in control of touch and their positive appraisal of touch in psychotherapy (Geib, 1998). Once relational touch is begun with a client, exercises using imagery can be used to explore the distinction between acceptable and unacceptable touch (Helfer, 1978). Clients can also be encouraged to deliberately engage in

using relational touch to touch trusted friends or animals or to engage in massage or games of contact sports (Helfer, 1978).

Western Subcultures and the Problem of Diverse Meanings

Another impediment to the use of relational touch in psychotherapy is the existence of numerous subcultures in Western society each of which may ascribe not only its own customs and rules of behavior, but also its own meanings and beliefs to touch. When the ethnic background of the therapist and client are different, it is critical for the therapist to process the meaning of relational touch with the client to avoid a possible misunderstanding of intent.

According to the theory of cultural relativity, the meaning of behaviors can often be best understood in relation to not only individuals' culture of origin, but also to their local culture (Smith, et. al., 1998). It is important, therefore, for psychotherapists to be culturally competent even when using therapeutic modalities in which relational touch is not the primary intervention, as the presence or absence of relational touch is inherent to every client encounter. This may be especially difficult for the psychotherapist who does not share the cultural background of the client.

The use of relational touch in greetings and farewells, for example, is a societal gesture that is often expected by clients and may have diverse meanings, not only for different clients, but also for the therapist and the client. According to Argyle (1998), Americans from southern and eastern Europe and Africa engage more physically in greetings and farewells, whereas Americans from northern Europe tend to be less demonstrative in their use of relational touch in these settings. In addition, psychotherapists should be aware that people of diverse ethnic backgrounds may be influenced by the local norms of the geographical location where they reside. For example, Californians touch each other more informally and more frequently during

greetings and farewells than do individuals living in New England (McNeeley, 1987). Thus, it may be difficult for the therapist to predict or to fully understand the meaning of these gestures to the client.

Psychotherapists often do not understand common societal gestures, such as handshakes, embraces, pecks on the cheek, or taps on the back in session as interventions; rather, they misinterpret them as social conventions performed before or after the real therapy. It is prudent to remember that relational touch in any form, even at the beginning or ending of the therapy session, is always a potentially powerful intervention with meaning that can and should be processed. Indeed, even helping an elderly individual don a coat at the end of a session, although banal on its surface, has meaning to both the therapist and the client. It may be prudent for therapists, therefore, to allow the client to initiate any handshakes or hugs to signify greetings and farewells if they are to occur and to not reciprocate until a full discussion of the meaning of these gestures, and how it might inform the client-therapist relationship, has taken place.

Interestingly, the use of these common social gestures in psychotherapy appears to be informed by gender. Stenzel (2004) found that both male and female psychologists touched female clients significantly more often than male clients. Milakovivh postulated that a male therapist may avoid hugging, holding, or using an intervention with touch with a male client because of concern surrounding homophobia. This may not be a significant concern of female therapists as therapists of both sexes were not only more apt to initiate relational touch, such as offering a hug or touching a shoulder, with female clients than with male clients, but also were more apt to receive relational touch, such as accepting a hug or a handshake, with female clients than with male clients (Stenzel, 2004). Overall, relational touch was most likely to occur in the female therapist-female client dyad (Stenzel, 2004).

Chapter 10: Some Pitfalls in the Use of Relational Touch in Psychotherapy: Political and Ethical Considerations

There are also political and ethical considerations that can impede psychologists' decision to use relational touch in psychotherapy. In order for psychologists to utilize relational touch responsibly as well as effectively, there should be extant guidelines that describe both its ethical and technical use in psychotherapy. Unfortunately, there has been insufficient research to provide these necessary guidelines. For example, there have been no large-scale randomized clinical trials published on the use of touch in psychotherapy.

Although the introduction to the APA Ethics Code states that the "membership in APA commits members and student affiliates to comply with the standards of the ethics code and to the rules and procedures used to enforce them," (APA, 2002, Introduction) the APA, the largest scientific and professional organization representing psychology in the United States, is silent on its stance on the use of touch in psychotherapy and has published no technical or ethical guidelines to aid practitioners in its use. Indeed, using the key word touch on its website's suggests that the term is not found anywhere in its database. This is unfortunate as the stated mission of the APA is to advance the creation, communication, and application of psychological knowledge to improve people's lives (APA.org).

Without the express support of the APA for the use of relational touch in psychotherapy, clinical psychology graduate schools may be less willing to offer courses and practical experience in the use of relational touch in psychotherapy. Without proper training and supervision, psychologists who wish to incorporate relational touch into their armamentarium cannot comply with Section 2.01 of the APA Ethics Code (2002) which cautions against psychotherapists using any psychotherapeutic technique without proper training: " Psychologists

provide services, teach and conduct research with populations and in areas only within the boundaries of their competence, based on their education, training, supervised experience, consultation, study or professional experience." Relational touch, therefore, should not be used in psychotherapy by therapists who view the modality as practicing outside of their area of professional competency. Regrettably, few psychotherapists have received adequate professional training in the use of relational touch. In general, the use of touch in psychotherapy is seldom discussed during training other than as a proscription against it. Fewer still are the number of psychotherapists who are competent in consultation and supervision in the use of relational touch and its ethical implications.

In the absence of guidelines on the use of relational touch, however, APA does provide practitioners with broad ethical guidelines regarding psychotherapeutic interventions. A perusal of its Ethics Code (APA, 2002) can be heuristic for the therapist intent on developing both ethical and technical criteria for the use of relational touch in psychotherapy.

The Principles of Autonomy and Respect for Client's Dignity

Psychologists who offer to use relational touch in psychotherapy must ensure that the client's autonomy governs the decision whether to use relational touch and that the client's dignity is respected throughout the process. The word autonomy, derived from the Greek *autos* meaning self and *nomos* meaning rule, is etymologically related to the self-rule of independent Hellenistic city-states. In health-care ethics, a client's autonomy can be thought of as self-rule that contains two components: liberty, (i.e., independence from controlling influences), as well as agency, (i.e., the capacity for intentional action) (Beauchamps & Childress, 2012). Thus, autonomous clients act freely in accordance with a self-chosen plan of treatment analogous to the way an independent government would manage its territories and set its policies through the

capacities of understanding, reasoning, deliberating, and independent choosing (Beauchamps & Childress, 2012).

The APA recognizes the principles of both autonomy and respect for clients' dignity in Principle A of its Ethics Code (2002): "Psychologists respect the dignity and worth of all people, and the rights of individuals to privacy, confidentiality, and self-determination. Psychologists are aware that special safeguards may be necessary to protect the rights and welfare of persons or communities whose vulnerabilities impair autonomous decision-making." One question providers may reflect upon to determine their compliance with this principle in the context of the use of relational touch in therapy is the following: Is the client making a decision to accept or refuse the use of relational touch that is voluntary, informed, and free of controlling influences? Regrettably, the answer to this question may be difficult for the psychotherapist to discern due to power dynamics embedded in the therapist-client dyad. An examination of the purposes and use of the process of informed consent or refusal, however, may be helpful in addressing this question.

The process of informed consent or refusal in the use of relational touch in psychotherapy. Standard 3.10a of the APA's Ethics Code (2002) states that a therapist who performs a service should obtain the informed consent or refusal of the client as early as is feasible in the therapeutic relationship using language that is reasonably understandable to that person. This ethical standard of care in psychological practices also applies to the use of relational touch in psychotherapy. Consequently, prior to the use of relational touch, the nature of its use, as well as its purpose in the context of the client's overall treatment goals, must be explicitly discussed with the client during the process of informed consent or refusal. Ideally, this discussion, which should include the potential clinical risks and benefits of relational touch, as

well as risks and benefits of the withholding of relational touch, should be documented (Standard 3.10 d).

Because the obtaining of informed consent or refusal is a process and not one moment in time, the discussion concerning the utilization of relational touch in therapy should take place prior to the initiation of therapy and reviewed as often as needed during the course of treatment. Once permission is obtained for the use of relational touch, consent does not necessarily generalize to other situations in which relational touch could be used, as each situation is unique (Hunter & Struve, 1998). Prior to each use of relational touch, therefore, the therapist should ask permission to utilize relational touch (e.g., "Is it OK with you if I touch your hand?") and to give the client the opportunity to decline. In order to judge that the client understands the clinical risks and benefits of relational touch, the therapist should become familiar with how a client experiences relational touch by requesting verbalization of the experiences of relational touch during and after the use of the modality. The prevailing proscription against the use of touch in psychotherapy, combined with the cultural tendency to sexualize touch, mandates that the therapist ensure that sufficient time should remain in session to process the effects of any relational touch that is used to address any feelings that are unexpectedly triggered.

Standard 10.01d of the APA Ethics Code (2002) encourages psychologists who are obtaining informed consent or refusal for treatment for which generally recognized techniques and procedures have not been fully established, such as the use of relational touch in psychotherapy, to inform their clients of the current research on the treatment and the potential benefits and risks involved. In addition, alternative treatments that may be available should be discussed. To comply with this standard, the therapist must be not only well-versed on the extant literature on the use of relational touch in psychotherapy, but also able to explain the literature

findings in language appropriate to the client's level of understanding that will allow informed decision making.

Informed refusal and empowerment. Importantly, the client must have the opportunity to decline the use of relational touch without the expectation of the need to justify that decision. Clients who have been able to set limits with authority figures in their past are more likely to have sufficient ego strength to voluntarily refuse the use of relational touch in psychotherapy. The therapist should reflect on whether the client has previously demonstrated an ability to verbalize no within the therapy relationship. In order for the therapist to determine that the client's refusal of the use of relational touch in psychotherapy is voluntary, informed, and free of controlling influences, the ability of the client to feel solidly empowered to decline the use of relational touch must be evaluated. Therefore, part of the informed consent or refusal process should be a discussion in therapy concerning the concept of empowerment.

The therapists' judicial use of influence and the avoidance of paternalism. The therapist should be cognizant of the potential power differentials inherent to the therapeutic setting as discussed above. In Western cultures, healers have historically been imbued with the powers to relieve pain and suffering through the use of skills which are acquired by only a minority of the community and, therefore, unfamiliar to most recipients. In general, healers have extensive formal education and high social status. It is possible that some clients, therefore, may interpret a mere offer of the use of relational touch in psychotherapy as a declaration by the therapist that the intervention has been deemed to be in the client's best interest. In addition, clients may believe that to decline its use would mean that they are not compliant with all therapeutic recommendations. Consequently, a client's decision to not use relational touch as

part of the therapeutic intervention may be informed by the concern that the therapist will withhold further treatment due to this perceived noncompliance.

A more deleterious misuse of the power dynamics inherent to the psychotherapy setting occurs when the therapist foregoes a discussion of informed consent or refusal with a client whom the therapist is concerned would otherwise refuse the use of relational touch in therapy. This most often occurs when the therapist believes that it would be in the client's best interest to participate in this modality. Even more egregious is the action of the therapist who knowingly overrides the client's informed refusal of the use of relational touch in psychotherapy and justifies the action through the rationale that its use would be in the client's best interest and welfare.

These actions, termed paternalism, are inconsistent with Principle F of the APA Ethics Code (2002): "Because psychologists' scientific and professional judgments and actions may affect the lives of others, they are alert to and guard against personal, financial, social, organizational or political factors that might lead to misuse of their influence." One question that providers may reflect on to determine their own compliance with this principle in their use of relational touch in psychotherapy is the following: Have the power dynamics inherent in the therapist-client dyad been fully processed with the client?

Regrettably, the answer to this question may be difficult for psychotherapists to fully discern. When there is doubt, an examination of feminist theory may be helpful in this reflection. According to feminist theory, touch, power, and status are closely linked. Feminist research demonstrates that, in Western culture, men are more likely to touch women than women are to touch men; moreover, people of higher socioeconomic status are more likely to touch people of lower socioeconomic status than vice versa (Hunter & Struve, 1998). Relational touch initiated

by the therapist, even in the presence of voluntary, informed consent, may, therefore, illuminate and reinforce the unequal power relationship between therapist and client.

The Principles of Non-malfeasance and Beneficence

The principle of non-malfeasance, often cited as *primum non nocere,* is a pillar of healthcare ethics (Beauchamps & Childress, 2012) and a moral obligation of all psychotherapists. Although the origin of the phrase is uncertain, it is thought to have first been penned by the Greek physician Hippocrates in his treatise *Epidemics* in the fourth century BC. This treatise consists of seven books which record observations, aphorisms, and prognostic indications made by itinerant physicians in northern Greece─Thessaly, Thrace, and the island of Thasos─between 410 and 350 BC. According to Hippocrates, a provider must have "two special objects in view with regard to disease, namely, to do good or to do no harm" (Hippocrates, trans. 1994).

A corollary of the concept of non-malfeasance is the principle of beneficence, another pillar of health-care ethics (Beauchamps & Childress, 2012). This principle was first described by John Stuart Mill in his 1863 compilation of articles entitled *Utilitarianism* where he argued that his principle of utility, or the greatest happiness principle, was the fundamental basis of ethics: "The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, hold that actions are right in proportion as they tend to promote happiness, wrong as they tend to promote the reverse of happiness" (p. 29).

Our interventions as therapists, therefore, can be considered to be beneficent if they lead to the greatest possible balance of beneficial consequences, or to the least possible balance of non-beneficial consequences, (i.e., if they maximize benefits and minimize harmful outcomes). Beneficence thus connotes acts of mercy, kindness, and charity and is suggestive of altruism,

love, humanity, and promoting the good of others (Beauchamps & Childress, 2012). It mandates that providers act for the benefit of others, helping them to further their legitimate interests (e.g., their treatment goals), often by preventing or removing possible harms.

The APA recognizes the principles of both non-malfeasance and beneficence in Principle A of its Ethics Code (2002): "Psychologists strive to benefit those with whom they work and take care to do no harm. In their professional actions, psychologists seek to safeguard the welfare and rights of those with whom they interact professionally." One question that providers may reflect on to determine their own compliance with this principle in their use of relational touch in psychotherapy is the following: "Is there a possibility of harm to my client as a result of my use of relational touch, even though remote?"

Principle 10.05 of the 2002 APA Ethics Code proscribes sexual contact between psychologist and client. According to Gutheil and Gabbard (1993), sexual contact between a psychotherapist and a client is best thought of as a process or a "slippery slope" in which there is increasing intrusion into a client's space (p. 188). These authors report that sexual misconduct usually begins with minor boundary violations which often show a crescendo pattern of increasing intrusion into the client's space. This may take the form of personal conversation intruding on clinical work; some common gestures, such as hugs, involving relational touch; sessions outside the office during meals; then other social events which lead to sexual behaviors. It is generally accepted and is acceptable that successfully achieving the intimacy required in a strong therapeutic alliance within the context of therapy may naturally elicit some level of physical attraction for either therapist or client which, when dealt with in a clinically responsible and ethical manner under consultation, can facilitate the therapeutic process (Hunter & Struve, 1998). Using relational touch when the content of the therapy concerns sexual issues, however,

risks eliciting transference or countertransference that may sexualize the touch (Hunter & Struve, 1998) thereby infringing on the boundaries of the Ethics Code. Relational touch should never be used, therefore, if the therapist or the client experiences sexual arousal during session. Moreover, it is the responsibility of the therapist to set this boundary and to interrupt and process any touch that leads to sexual arousal.

Chapter 11: Knowing the Place Again for the First Time

We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time. -- T. S. Eliot

In my role as a physician, I understand a patient's presenting problem primarily through the use of the question how, for example, "How are you feeling?," "How did you get that infection?," or "How did you hurt yourself?" Meaning is made through physical exams, x-rays, lab values, and pathology reports. As medicine is a hand skill, the physician's armamentarium, including touch, allows me to diagnose patients' maladies (e.g., collecting cells for a Pap smear), treat their suffering (e.g., performing hysterectomies for fibroid tumors), and reassure them that they are safe in my hands (e.g., palpating the unfortunate skier's leg.) My touch is received by the somatosensory portion of the parietal lobe of the cerebral cortex then routed to the amygdala for the establishment of valence. In short, I connect with my patients when my touch connects with their limbic system.

In my role as a psychotherapist, things are a little different. I understand a client's presenting problem through the use of the question why—a grittier line of inquiry—for example, "Why do you feel that way?," "Why are you coming for help now?," or "Why is our time together important for you?" Meaning is made through the ongoing dialogue between the therapist and the client. As in my role as a physician, I also diagnose, treat, and reassure to connect with those in my care. But how am I to connect with my client's limbic system without the use of touch? How do I successfully prestidigitate without the wand?

From John Bowlby to Harry Harlow to Daniel Winnecott to Alexander Lowen, the meaning of touch in human growth and development has been in the purview of psychologists. Although John Watson preached the dangers of mother-love, Rene Spitz's observations in

foundling homes challenged the behavioralism of the time by recording how relational touch is necessary not only for physical survival, but also for brain development. John Bowlby furthered Spitz' work and challenged Anna Freud's "cupboard-love" theories (Freud, A., 1952) by conjecturing that primates are biologically programmed to promote safety by forming a relationship with a primary care giver to satisfy their physiological and psychological need for relational touch. Harry Harlow's infant Masques sealed the deal by choosing the terry-cloth surrogate mother with no nutritive value over the milk-laden wire-mesh, cylinder ones and catapulted relational touch as an inborn need, the determinate factor in the mother-infant bond, and the fundamental building block of a child's "psychological birth" (Schore, 2012, p. 32). Contemporary psychologists are therefore aware that their clients are hardwired to need touch for growth and development. And what psychologist does not consider growth and development to be an overarching goal of psychotherapy? It is curious to me that most of us psychotherapists follow Freud's proscription on the use of relational touch in psychotherapy as a primary intervention, while simultaneously acknowledging that both Freud and Winnecott utilized relational touch in psychotherapy with good outcomes.

So, given the myriad benefits of the use of relational touch in psychotherapy described in this essay, including its ability to promote a therapeutic alliance, increase the client's self-disclosure, and create safe space in session, it is regrettable to this writer not only that its use as a primary intervention has not been more widely taught and accepted, but also that its common usage in psychotherapy, such as during greetings and farewells, has not been more fully discussed and understood. Can we as a profession really keep quiet about those hugs that get planted on us at the end of a session, the reassuring touch on the shoulder as the client leaves the office, or the hand grasping the Kleenex that needs holding?

I accept that cultural considerations create pitfalls (indeed, some would say landmines) to the judicious use of relational touch. For example, there are power dynamics inherent to the therapist-client dyad that can problematically influence a therapist's offer and a client's acceptance of the use of relational touch. I also acknowledge that there are political and ethical considerations that create deterrents to the use of relational touch, most notably, in my opinion, APA's selective mutism on the issue. Indeed, the most salient reasons for this writer's non-use of relational touch as a primary therapeutic modality in psychotherapy is ethically-based: Because I am not trained in its techniques, my use of relational touch would violate Section 2.01 of the APA Ethics Code (APA, 2002).

Although that is a boundary that I am not willing to cross, I have to admit that not being able to touch my clients creates other difficulties for me as a psychotherapist. For example, during a community-based practicum at ANE when I first began working as a psychotherapist, I was initially annoyed by what I perceived to be the large space between the client and me in the room. Admittedly, the distance between the client's chair and my chair could not have been more than two or three feet; but for me, it was the length of the Orange Bowl. In my role as a physician, when diagnosing or healing, whether in the exam room or the operating room, the space between me and my patient is small and is breached by touch. In my role as a psychotherapist, with its absence of touch, I perceived the space between me and my client to be a chasm, a daunting Rubicon to be crossed.

Initially, I found myself envying mothers and infants whose space between them can be breached by relational touch, an event that results in a cascade of biochemical processes, creating new neural networks throughout the brain (Schore, 1994) and enhancing resilience and survival. Over time, my irritation with this putative chasm in the therapy room turned to curiosity, then to

fascination, as I began to experience that space in my own work differently (i.e., not only as a place through which the therapist-client relationship is born and nurtured, but also as a place where creativity could develop and healing could take place). Pediatrician turned psychologist Daniel Winnecott (1965) recognized the value of this space decades before me, describing it as a playground—the overlap of the therapist's and the client's play area—and I have adopted that metaphor in my conception of the meaning of that space in my own work.

Moreover, writing this essay has taught me that touch is but one of the pre-verbal attachment communications, albeit an important one, that providers can use to connect to the limbic system of the client for affective experience and affective regulation. Other pre-verbal, right-brain communications so central to the maternal-child dyad, such as unconditional positive regard, presence, attention, eye-contact, prosody, tone and pitch of voice, and attunement forge a secure therapeutic alliance and impact both physiological and emotional homeostasis and regulation. According to Lewis, Amini, and Lannon (2000), these communications are unlike the fancy neocortical skill of speech; rather, these communications belong to the older realm of the emotional mind and create emotional regulation through the limbic resonance of being known to another caring and attentive human being.

During psychological treatment, my goal to create a holding environment for my client without the use of touch must begin with the same preverbal attachment communications we have discussed above. Indeed, I am sure that it is these preverbal elements of connection, such as intonation, prosody and synchronized rhythm, that impact stored, historical neural pathways derived from the early mother-infant dyad. According to Andrade (2005), for example, it is the affective content of the therapist's voice (which originates from and is processed by the right

brain), and not the semantic content (which originates from and is processed by the left brain), that has an impact on a client's store of implicit memories.

Admittedly, in the course of a psychotherapy session, the verbal content is important. But the empathic therapist, from the very first point of contact, is using primarily her right brain to consciously attune to the non-verbal, moment-to-moment rhythm of the client's internal state and is relatively flexibly and fluidly modifying her own behavior to synchronize with that cadence (Schore, 2003b). Advances in neuroscience suggest that the capacity to receive and to express communications is optimized when the therapist is in a state of right brain receptivity (Schore, 2012) and is utilizing her right brain to attune to the right brain of the client (Marcus, 1997). In this way, the foundation for the therapeutic alliance is laid and holding, without touching, is begun.

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